

031088-000002.QGC.219647

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Harold L. Bennett

Serial No. 09/994,560

Filed: November 27, 2001

IMPROVED PROCESS FOR PRODUCTION
OF LOW TEMPERATURE CHAR
DURING PRODUCTION OF LOW
TEMPERATURE TARS

)
) Before the Examiner

)
) Cephia D. Toomer

)
) Group Art Unit 1714

)
) May 15, 2003

AMENDMENT UNDER 37 CFR § 1.115

Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated January 15, 2003, please enter the following amendments and consider the following remarks:

INTRODUCTION

Claims 1-21 are pending in the application, and have been rejected or objected to in the Final Office Action. Applicant enters the following Amendment in order to place the Claims which the Examiner has identified as being directed to patentable subject matter into a condition for allowance.

I hereby certify that this paper is being facsimile
transmitted to the Patent and Trademark Office to (703)
746-4176 on the date shown below.

Quentin G. Cantrell

Name of Registered Representative



Signature

May 15, 2003

Date of Signature

IN THE CLAIMS

Please amend the Claims as follows:

1. (Presently amended.) A method for preparing carbon-derived char comprising the steps of:
 - (a) providing a carbonaceous precursor material;
 - (b) lowering the agglomeration value of the carbonaceous precursor material through the addition of inert organic matter;
 - (c) raising the percentage of volatiles in the carbonaceous precursor material to prevent agglomeration and caking;
 - (d) roasting the carbonaceous precursor material for between about 2 hours and about 4 hours in a multi-hearth roaster including a plurality of decks constructed of non-corrosive metal with high-heat transfer characteristics, with the ability to move a thin layer to material with rotating arms equipped with plow-shaped protrusions, in a substantially anaerobic environment at a roasting temperature between about 300 and 700 degrees Celsius; [and]
 - (e) cooling the resultant solid char[.];
 - (f) after step (d) and before step (e) extracting tar gases;
 - (g) before step (e) filtering the tar gases; and
 - (h) before step (e) washing the tar gases.

2. (Cancelled.)
 3. (Cancelled.)
 4. (Cancelled.)
 5. (Cancelled.)
 6. (Currently Amended) The method of claim 1 [5 wherein the roaster further includes a plurality of decks constructed of non-corrosive metal with high-heat transfer characteristics,] wherein each deck includes floor supports and ceilings formed from thin-shelled reinforced concrete double-wall construction.
 7. (Original) The method of claim 6 wherein the roaster further includes a number of outside walls and wherein each outside wall has at least one port adapted to provide anaerobic access to the roaster.
 8. (Presently Amended) The method of claim [2] 1 wherein step (f) includes the use of injected steam to assist in the removal of the tar and producer gases.
 9. (Presently Amended) The method of claim 1 further comprising the step of after step (a) and before step (d) adding a carbonate acceptor material to facilitate sulfur removal.
-
10. (Presently Amended) The method of claim 1 wherein step (e) further includes depositing the resultant solid char in an inverted cone-shaped bin and injecting steam thereinto.

11. (Presently Amended.) A low-emission solid carbonaceous fuel produced by the following process steps:

- a) providing a carbonaceous precursor material;
- b) lowering the agglomeration value of the carbonaceous precursor material through the addition of inert organic matter;
- c) raising the percentage of volatiles in the carbonaceous precursor material to prevent agglomeration and caking;
- d) roasting the carbonaceous precursor material for between about 2 hours and about 4 hours in a multi-hearth roaster including a plurality of decks constructed of non-corrosive metal with high-heat transfer characteristics, with the ability to move a thin layer to material with rotating arms equipped with plow-shaped protrusions, in a substantially anaerobic environment at a roasting temperature between about 300 and 700 degrees Celsius; [and]
- e) cooling the resultant solid char[.];
- f) after step (d) and before step (e), extracting tar gases;
- g) before step (e), filtering the tar gases; and
- h) before step (e) washing the tar gases.

12. (Cancelled.)

13. (Cancelled.)

14. (Cancelled.)

15. (Cancelled.)

16. (Currently Amended.) The method of claim 11 [15 wherein the roaster further includes a plurality of decks constructed of non-corrosive metal with high-heat transfer characteristics,] wherein each deck includes floor supports and ceilings formed from thin-shelled reinforced concrete double-wall construction.
 17. (Original) The method of claim 16 wherein the roaster further includes a number of outside walls and wherein each outside wall has at least one port adapted to provide anaerobic access to the roaster.
 18. (Currently Amended) The method of claim [12] 11 wherein step (f) includes the use of injected steam to assist in the removal of the tar gases.
 19. (Presently Amended) The method of claim 11 further comprising the step of after step (a) and before step (d) adding a carbonate acceptor material to facilitate sulfur removal.
 20. The method of claim 11 wherein step (e) further includes depositing the resultant solid char in an inverted cone-shaped bin and injecting steam thereinto.
 21. (Cancelled.)
-

REMARKS

The office action identified Claims 6-8 and 16-18 as being directed to patentable subject matter, but objected to them as being dependent upon rejected claims.

Claim 1 has been re-written herein to include all of the limitations of Claim 6, with the exception of "each deck includes floor supports and ceilings formed from thin-shelled reinforced concrete double-wall construction." Because the plurality of decks is nowhere taught or suggested in the prior art, it is respectfully submitted that this limitation is not required to place Claim 1 in condition for allowance. This limitation has been retained in Claim 6, which now depends directly from Claim 1.

Claims 9 and 10 depend from Claim 1, and therefore include each of its limitations. It is therefore respectfully submitted that they are in a condition for allowance.

Claim 11 has been amended, analogously to Claim 1, to include all of the limitations of Claim 16, except "each deck includes floor supports and ceilings formed from thin-shelled reinforced concrete double-wall construction." Similarly, Claim 16 retains this limitation in a dependent claim. Also analogously, Claims 19 and 20 are believed to be in a condition for allowance because of the new limitations added herein to the claim from which they depend.

CONCLUSION

For the foregoing reasons, Applicant submits that all claims are in a condition for allowance, and respectfully requests a Notice of Allowance for all pending claims.

No fees are believe to be necessary. Nevertheless, the Commissioner is hereby authorized to charge any fees due, including statutory fees for extensions of time, to Deposit Account No. 23-3030, but not to include any payment of issue fees.

Respectfully submitted,

By



Quentin G. Cantrell

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Subject: 31088-2 Bennett 09/994,560

Status: Not Started
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Total Work: 0 hours
Actual Work: 0 hours

Owner: Gropp, Noreitta

9/25/02 - QGC working atty on this file per TJ.
 Amendment due 9/26. (10/26/02 - 6 month final.)
 Had dktg move deadline two weeks; started trans. fm.
 9/26/02 -- Filed Amendment & 2-month E/T.
FINAL OA 4/15-7/15

2/25/03 - Ltr client recom'g abandon rejected claims & get patentable ones issued.

2/25/03 - Rpt'd Final O.A. to client

3/21/03 - reminded Q & asked if he had spoken w/client recently.

3/20/03 - e-mailed Quentin asking if he had spoken w/client recently.

4/11/03 - called Quentin's to O.A. due date(s).

4/15/03 - Today is the 3-month for response to the final office action; I moved the date one month. Have you heard from the client? Yes, I did. I believe we're going to file a response essentially implementing the examiner's suggestions, but not today. q

4/13/03 - e-mailed Quentin reminder of 4-month due date of 5/15.

5/15/03 - per Quentin we are going to file response to O.A. 5/15 plus 1 month E/T.

5/15/03 - filed response to final O.A. and 1-month E/T via fax

6/11/03 - Ltr client re publication.

7/24/03 - received phone call from Examiner Toomer who had not received our 5/15 filed response to final O.A. & 1-month E/T which was faxed on 5/15. She said that it might be in scanning as all documents are now scanned in order to eliminate paperwork. I said that I would pull the file and verify that the fax had been received and would call her.

7/24/03 - 10:45 a.m. - Called Examiner Toomer's direct number (703-308-2509). Had to leave voice mail - verified that fax had been sent and received according to our machine by the PTO's office (we have confirmation that all pages went through). I left my name and phone no & ~~Quentin's name and said I would wait for her call if she wished me to refax~~ the document or whatever she wished me to do.

EXHIBIT

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FROM: Quentin G. Cantrell
DATE: May 15, 2003

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SECONDARY FAX number: (317) 637-7587

SPECIAL REMARKS: App No. -09/994,560 (Our Dkt No. 31088-2)

Transmittal Form

Fee Transmittal Form

Request For Extension Of Time

Amendment Response to Final Office Action.

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